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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

SK

Office Action Summary	Application No.	Applicant(s)	
	10/650,597	ZETTWOCH, ROBERT NEAL	
	Examiner	Art Unit	
	Pao Sinkantarakorn	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-77* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2/20/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-77 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-55 of copending Application No. 10/930,973. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications disclose interface unit in a fiber channel network.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

3. Claims 1-54 are objected to because of the following informalities:

Regarding claim 1 lines 4-5, the phrase "a Fibre Channel network" seems to refer to "a Fibre Channel network" previously recited in claim 1 line 1; if this is true, it is suggested to rewrite "a Fibre Channel network" to ---the Fibre Channel network---. The same is true for claims 20 and 34.

Claims 2-19, 21-33, 35-54 are then objected because they depend on the objected claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10, 16-18, 20-28, 34-45, and 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Borland (US 6,343,217).

Regarding claim 1, Borland discloses a system for interfacing with at least one node in a Fibre Channel network (see column 3 lines 34-37, the units communicate through a wireless link such as optical signal), the system comprising:

at least one input interface couplable to receive a plurality of frames of data (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical

signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames), the frames of data being at least one of transmitted and received at a node of a Fibre Channel network (see Fig 2 reference numeral 225T, the optical signal received by the selector 225T is transmitted from either a microphone 210T or modem port 212); and

an output interface couplable to provide the received frames of data to a device (see column 5 lines 30-32, the TX output stage transmit optical signals to base unit transceiver 120 through wireless PCM link).

Regarding claim 20, Borland discloses a system for interfacing with at least one node in a Fibre Channel network, the system comprising:

at least one input interface couplable to receive a plurality of frames of data (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames), the plurality of frames of data being at least one of transmitted from and received back in a node of a Fibre Channel network (see Fig 2 reference numeral 225T, the optical signal received by the selector 225T is transmitted from either a microphone 210T or modem port 212);

an output interface couplable to provide the received frames of data in pulse code modulation (PCM) formatted frames to a device (see column 5 lines 30-32, the TX output stage transmit optical signals to base unit transceiver 120 through wireless PCM link); and

a processor coupled to control the input interface and the output interface (see Fig 2 reference numeral 225T and column 5 lines 46-53, the selector 225T switches the input between microphone and modem port).

Regarding claim 34, Borland discloses a Fibre Channel network comprising:

a first port configured to at least one of transmit and receive a plurality of frames of data (see Fig 2 reference numeral 260R, RX input stage is configured to receive optical signals);

a second port configured to transmit a plurality of frames of data (It is inherent that there are more than one ports configured to transmit optical signals in a network);

a third port configured to at least one of transmitted and receive a plurality of frames of data (see Fig 2 reference numeral 260T, TX output stage is configured to transmit optical signals);

a fourth port configured to transmit a plurality of frames of data (It is inherent that there are more than one ports configured to transmit optical signals in a network);

a first network device having a first node coupled to the first port (see Fig 2 reference numeral 210R, the speaker 210R is coupled to the RX input stage);

at least one second network device having a second node coupled to the third port (see Fig 2 reference numeral 210T, the microphone 210T is coupled to the TX output stage); and

a system operatively coupled to and adapted to interface with the first and second nodes, the system including:

at least one input interface couplable to receive a plurality of frames of data (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames), the plurality of frames of data being at least one of transmitted from and received back in a node of a Fibre Channel network (see Fig 2 reference numeral 225T, the optical signal received by the selector 225T is transmitted from either a microphone 210T or modem port 212);

an output interface couplable to provide the received frames of data in pulse code modulation (PCM) formatted frames to a device (see column 5 lines 30-32, the TX output stage transmit optical signals to base unit transceiver 120 through wireless PCM link).

regarding claims 2, 21, and 37, the input interface includes an optical connection couplable to the node of the Fibre Channel network (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames);

regarding claims 3, 22, and 38, the input interface includes an electrical connection couplable to the node of the Fibre Channel network (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames);

regarding claims 4, 23, and 39, the input interface is programmable to receive all of the plurality of the frames of data that are transmitted from or received at the node (see column 5 lines 46-53, the selector receives all of the data frames from the microphone and the modem port and it then selects which data frames to be processed);

regarding claims 5, 24, and 40, the input interface is programmable to receive frames of data that are transmitted from the node to destination nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claims 6, 25, and 41, the input interface is programmable to receive frames of data that are received at the node from source nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claims 7, 26 and 42, the device includes a recorder (see column 4 lines 58-65, the base transceiver station is used in telephone system and most modern telephone system allows voice message, which is considered a recorder);

regarding claims 8, 27, and 43, the device includes a telemetry device (see column 5 lines 30-32, base unit transceiver);

regarding claims 9, 28, and 44, the telemetry device includes a real-time monitor (see column 5 lines, base unit transceiver monitors and communicates in real-time);

regarding claims 10 and 45, the output interface is configured to provide the received frames of data in pulse code modulation (PCM) formatted frames (see column 5 lines 60-63);

regarding claims 16 and 51, further comprising a processor coupled to control the input interface and the output interface (see Fig 2 reference numeral 225T and column 5 lines 46-53, the selector 225T switches the input between microphone and modem port);

regarding claims 17 and 52, the processor is configured to program the input interface to receive frames of data at the node from source nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claims 18 and 53, the processor is configured to program the input interface to receive frames of data transmitted from the node to destination nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

Regarding claims 35 and 36, further comprising a first Fibre Channel switch that includes the first and second ports and a second Fibre Channel switch that includes the third and fourth ports (see column 5 lines 34-53).

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 11-15, 29-33, and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland in view of Tedenstig (US 6,307,859).

Regarding claims 11, 29 and 46, Borland discloses all the subject matter of the claimed invention except the step of timestamping the PCM frames. However, Tedenstig from the same or similar fields of endeavor discloses a system, wherein each PCM frames is divided into a number of time slots, where a certain time slot normally is used for transfer of signals in one channel (see column 7 lines 41-67).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a system, wherein the PCM frames are time stamped as taught by Tedenstig into the interface unit of Borderland.

The motivation for implementing a system, wherein the PCM frames are time stamped is that it increases efficiency of the system.

Regarding claims 12-15, 19, 30-33, 47-50, and 54, Borland discloses all the subject matter of the claimed invention except the system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface. However, Tedenstig from the same or similar fields of endeavor discloses a system, wherein the PCM frames are filled with an empty message to maintain a transfer rate of 64 kbit/sec, but other transfer rates are also possible (see column 5 lines 41-45 and column 7 lines 41-67).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface as taught by Tedenstig into the interface unit of Borderland.

The motivation for implementing a system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface is that it increases efficiency of the system.

10. Claims 55-68 and 74-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland in view of White, III (US 6,561,454).

Regarding claims 55 and 56, Borland discloses a plurality of avionics units networked with a Fibre Channel network, the network comprising:

a first port configured to at least one of transmit and receive a plurality of frames of data (see Fig 2 reference numeral 260R, RX input stage is configured to receive optical signals);

a second port configured to transmit a plurality of frames of data (It is inherent that there are more than one ports configured to transmit optical signals in a network);

a third port configured to at least one of transmitted and receive a plurality of frames of data (see Fig 2 reference numeral 260T, TX output stage is configured to transmit optical signals);

a fourth port configured to transmit a plurality of frames of data (It is inherent that there are more than one ports configured to transmit optical signals in a network);

a first network device having a first node coupled to the first port (see Fig 2 reference numeral 210R, the speaker 210R is coupled to the RX input stage);

at least one second network device having a second node coupled to the third port (see Fig 2 reference numeral 210T, the microphone 210T is coupled to the TX output stage); and

a system operatively coupled to and adapted to interface with the first and second nodes, the system including:

at least one input interface couplable to receive a plurality of frames of data (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames), the plurality of frames of data being at least one of transmitted from and received back in a node of a Fibre Channel network (see Fig 2 reference numeral 225T, the optical signal received by the selector 225T is transmitted from either a microphone 210T or modem port 212);

an output interface couplable to provide the received frames of data in pulse code modulation (PCM) formatted frames to a device (see column 5 lines 30-32, the TX output stage transmit optical signals to base unit transceiver 120 through wireless PCM link).

Borland does not disclose a fixed wing aircraft comprising: a fuselage; at least one engine; and lift generating surface. However, the invention of White, III discloses an

aircraft comprising: a fuselage; at least one engine; lift generating surface; and a data network (see abstract).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a fixed wing aircraft comprising: a fuselage; at least one engine; and lift generating surface as taught by White, III and replacing the data network with the fibre channel interface unit of Borland.

The motivation for implementing an aircraft comprising: a fuselage; at least one engine; and lift generating surface is that it increases versatility of the system.

Regarding claim 57, Borland in view of White, III disclose all the subject matter of the claimed invention except the rotary wing aircraft. However, it is well known in the art to implement an interface unit in a rotary wing aircraft.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a fibre channel interface unit as taught by Borland into a rotary wing aircraft.

The motivation for implementing a fibre channel interface unit into a rotary wing aircraft is that it increases the efficiency of the aircraft.

Regarding claims 58 and 59, Borland discloses a system further comprising a first Fibre Channel switch that includes the first and second ports and a second Fibre Channel switch that includes the third and fourth ports (see column 5 lines 34-53);

regarding claim 60, the input interface includes an optical connection couplable to the node of the Fibre Channel network (see Fig 2 reference numeral 225T, the

selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames);

regarding claim 61, the input interface includes an electrical connection couplable to the node of the Fibre Channel network (see Fig 2 reference numeral 225T, the selector 225T is configured to receive an optical signal to be processed by the transmitter, wherein the optical signal could be a plurality of data frames);

regarding claim 62, the input interface is programmable to receive all of the plurality of the frames of data that are transmitted from or received at the node (see column 5 lines 46-53, the selector receives all of the data frames from the microphone and the modem port and it then selects which data frames to be processed);

regarding claim 63, the input interface is programmable to receive frames of data that are transmitted from the node to destination nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claim 64, the input interface is programmable to receive frames of data that are received at the node from source nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claim 65, the device includes a recorder (see column 4 lines 58-65, the base transceiver station is used in telephone system and most modern telephone system allows voice message, which is considered a recorder);

regarding claim 66, the device includes a telemetry device (see column 5 lines 30-32, base unit transceiver);

regarding claim 67, the telemetry device includes a real-time monitor (see column 5 lines, base unit transceiver monitors and communicates in real-time);

regarding claim 68, the output interface is configured to provide the received frames of data in pulse code modulation (PCM) formatted frames (see column 5 lines 60-63);

regarding claim 74, further comprising a processor coupled to control the input interface and the output interface (see Fig 2 reference numeral 225T and column 5 lines 46-53, the selector 225T switches the input between microphone and modem port);

regarding claim 75, the processor is configured to program the input interface to receive frames of data at the node from source nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data frames to be processed based on some kind of identification, which identifies the microphone and the modem port);

regarding claim 76, the processor is configured to program the input interface to receive frames of data transmitted from the node to destination nodes having predetermined addresses (see column 5 lines 46-53, the selector selects which data

frames to be processed based on some kind of identification, which identifies the microphone and the modem port).

11. Claims 69-73 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland and White, III as applied to claim 55 above, and further in view of Tedenstig.

Regarding claim 69, Borland discloses all the subject matter of the claimed invention except the step of timestamping the PCM frames. However, Tedenstig from the same or similar fields of endeavor discloses a system, wherein each PCM frames is divided into a number of time slots, where a certain time slot normally is used for transfer of signals in one channel (see column 7 lines 41-67).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a system, wherein the PCM frames are time stamped as taught by Tedenstig into the interface unit of Borderland.

The motivation for implementing a system, wherein the PCM frames are time stamped is that it increases efficiency of the system.

Regarding claims 70-73 and 77, Borland discloses all the subject matter of the claimed invention except the system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface. However, Tedenstig from the same or similar fields of endeavor discloses a system, wherein the PCM frames are filled with an empty message to maintain a

transfer rate of 64 kbit/sec, but other transfer rates are also possible (see column 5 lines 41-45 and column 7 lines 41-67).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface as taught by Tedenstig into the interface unit of Borderland.

The motivation for implementing a system, wherein the output interface is configured to fill the PCM frames with a fill word at approximately 10 milliseconds to maintain a substantially constant output frame rate when a frame of data is not available from the input interface is that it increases efficiency of the system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Choong et al. (US 2003/0013465) and Keenan (US 6,215,789) are cited to show systems/methods considered pertinent to the claimed invention.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER